

THE 1874 GERMAN TRANSIT OF VENUS EXPEDITION AT THE AUCKLAND ISLANDS, THEN & NOW: SOME PHOTOGRAPHIC COMPARISONS FROM A VISIT IN 2007

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The illustration on the cover is a photograph taken by Dr Guido Wolfram on the German Transit of Venus Expedition in 1874. The three “weary astronomers” [cf. Dawson & Duerbeck 2008: 24] are, from left to right, Dr Hugo von Seeliger (astronomer), Hermann Leyser (mechanic), and Kapitän-Leutnant W.J. Becks (Imperial German Navy) – see details in Dawson & Duerbeck 2008: 7, 9, & 10.

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The 1874 German ‘Transit of Venus’ Expedition at the Auckland Islands, then & now: some Photographic Comparisons from a visit in 2007

By Ian Armitage¹

BACKGROUND

A presentation² about the 1874-1875 German Transit of Venus Expedition was one of several made at a symposium held in Wellington in August 2006 as a part of the bi-centenary of European discovery of the Auckland Islands. Using surviving written and photographic records, Elliot Dawson and German colleagues are presently documenting the history of the 1874-75 expedition and their presentation to the symposium was a progress report of their joint research. This note may be a useful contribution towards current historical research on the German expedition, in addition to providing information for other German historians of science.

A collection of photographs made in 1874-75 by the chief photographer of the Transit of Venus Expedition, Hermann Krone,³ is held at the Dresden Technical University, Germany. In early September 2006 during a visit to Germany with my wife, Gwyneth Armitage, we were fortunate enough to be able to meet Mr Andreas Heine, Curator of Historical Photography at Dresden Technical University⁴ and could examine the collection of Krone photographs stored there. We were the first New Zealanders to have visited the Institut für Angewandte Photophysik and to have viewed the Krone collection (although Elliot Dawson had worked with Krone's photographs in correspondence with previous curators). With Andreas Heine's consent, parts of the Krone collection were photographed. Negatives from which the 1874-75 photographs were made no longer exist.⁵

I explained to Andreas Heine that I was planning to visit parts of the Auckland Islands in early 2007 during a private voyage by yacht to the New Zealand sub-Antarctic islands. The proposed visit could therefore present an opportunity to examine the location of the Transit of Venus Expedition and to attempt to locate at least some historical sites and relics and to photograph them. This opportunity was welcomed by Andreas Heine as it would enable some comparisons to be made between the appearance of the site in 1874-75 and the present day – a time difference of

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² ‘The Transit of Venus Expedition at the Auckland Islands, 1874-1875’, by Elliot Dawson & Hilmar Duerbeck. A Presentation made to the Bicentenary Celebrations of European Discovery of the Auckland Islands. Royal Society of NZ, Wellington, August 2006, subsequently published (2008) as Dawson, E.W.; Duerbeck, H.W.: ‘The German Transit of Venus Expedition at the Auckland Islands 1874-1875.’ *The Hutton Foundation New Zealand Special Papers* 3: iv + 1-30, 40 figs.

³ Krone subsequently related the history and events of the expedition in verse form in one of the volumes of his world trip – Krone, H. 1900: *Dichtungen von Herman Krone. Zweiter Band. Welt-Reise. 1. Die Auckland-Insel und Australian ...* Halle a. Saale: Commissions-Verlag Otto Hendel [see Dawson & Duerbeck 2008 for more detail.]

⁴ Address: Hermann-Krone-Sammlung, Institute für Angewandte Photophysik, TU Dresden, George-Bähr Strasse 1a, 01069 Dresden, Germany.

⁵ Other photographs taken by Krone, and by Dr Guido Wolfram, are also held in several other institutions in Germany (see Dawson & Duerbeck 2008: 16).

133 years. E-mail correspondence with Andreas Heine and with Elliot Dawson between September and December 2006 provided valuable background notes for study before the voyage commenced, including the geographic coordinates of the site,⁶ an 1874 German site map and high resolution digital files of some Krone photographs.

VISIT TO TERROR COVE, PORT ROSS, 22 JANUARY 2007

I visited the Auckland Islands between 21 and 24 January 2007 as a part of a cruise to both Auckland and Campbell Islands on the motor yacht *Tiama*, skippered by Henk Haazen of Auckland. The yacht was in Port Ross on 21 and 22 January and anchored for the night of 21 January in Erebus Cove, about one kilometre from the Terror Cove site of the German expedition. The Terror Cove expedition site was easily located⁷ and together with several others sailing on the *Tiama* we came ashore from an inflatable boat at about 8 am on 22 January. It was an historic moment with the feeling that one was quickly moving back in time! Prints of some Krone photographs and the 1874 site map were carried during the visit. The red brickwork column of a part of the observatory was clearly visible from the boat as we approached the rocky shore. The weather on the morning of 22 January was light misty rain and a cool (8°C) south-westerly wind was blowing – weather conditions that the expedition members would probably have experienced often during their five-month stay. A map of Port Ross showing the location of the German expedition site is shown as Fig. 1. More than one hour was spent at the site and, despite the rain, I was able to explore through the bush and make several photographs of the site and of relics. A plan of the 1874 expedition site drawn by Johannes Krone (son of the chief photographer, Hermann Krone) published in 1898 by Auwers in the official report of the expedition⁷ and provided by Dr Hilmar Duerbeck was very helpful during the visit (Fig. 2).

⁶ Pers. Comm. Dr Hilmar Duerbeck. Geographic coordinates – 50° 32' 14.4" S, 166° 13' 27.9" E, from Auwers 1898: 1, p. 309).

⁷ Auwers, A. von (ed.) 1887-1898. *Die Venus-Durchgänge 1874 und 1882. Bericht über die deutschen Beobachtungen im Auftrage der Commission für die Beobachtung des Venus-Durchganges herausgegeben.* Vols 1-6. Berlin: Reichsdruckerei

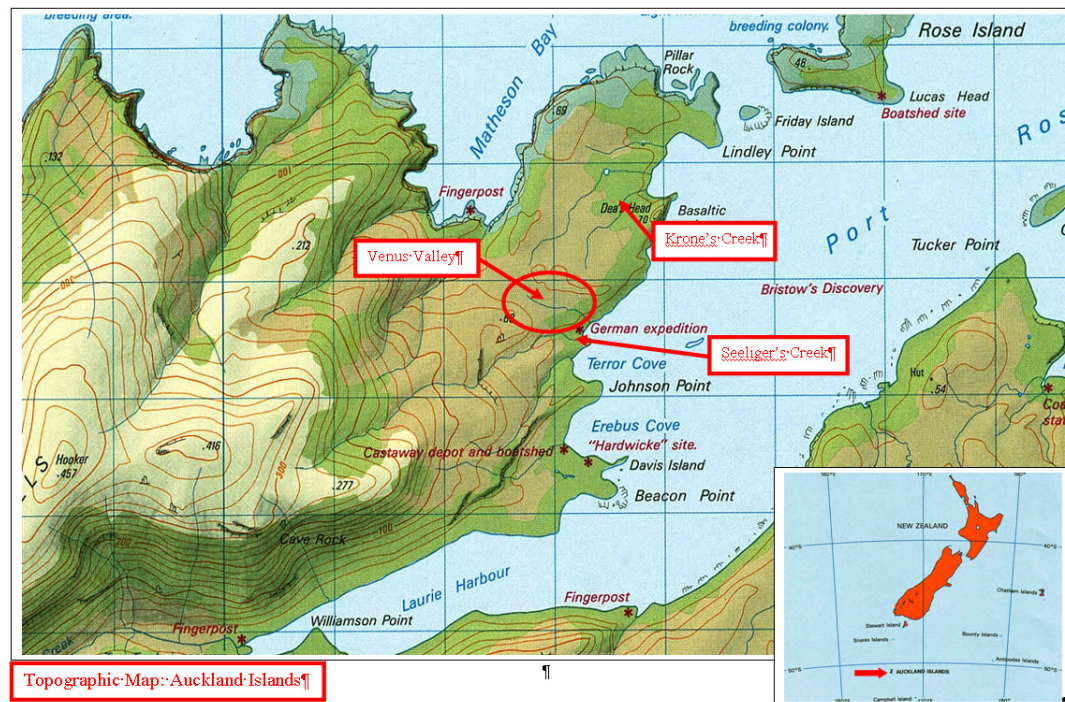


Figure 1: Map of part of Port Ross (the grid squares are 1 km x 1km): from Topomap Auckland Islands. Infomap 260, Department of Survey and Land Information. Edition 1, 1991, scale 1:50,000 (with newly-gazetted place names added).⁸

APPEARANCE OF THE EXPEDITION SITE IN 2007

The valley floor of the Terror Cove site had probably been cleared of forest by the expedition members but it may have been partly clear at the time. Two of the 1874 photographs⁹ show that many rata trees on the nearby slopes had been damaged, possibly caused by fire. Forest clearance may have taken place during land clearing associated with the establishment of the short-lived Enderby Settlement¹⁰ in Port Ross 25 years earlier, located in Erebus Cove between one and 1.5 kms to the south. Today all of Terror Cove has been reclaimed by forest, the only easily recognisable parts of the landscape being the short steep rocky foreshore, the stream⁷ flowing into the sea at the south end of the beach and a rocky headland named as Hunting Point on the German locality plan. These features appear to be unchanged from those shown in the 1874 photographs. The land is now covered with dense, wet forest dominated by southern rata (*Metrosideros umbellata*), in places up to 10-12 metres tall. Grass tree (*Dracophyllum longifolium*) is also prominent as a woody undergrowth species. Smaller shrubs, some ferns (especially *Polystichum vestitum*), sedges and mosses grow vigorously.

⁸ Krone's (1900) narrative records several names bestowed by the expedition members for the little streams in the vicinity of the campsite – Seeliger's Creek, Schur's Creek, Monckton's Stream, Ross Creek, and Krone's Creek. Following a plea made by Dawson & Duerbeck (2008: 19) that the New Zealand Geographic Board might recognise these names, and a subsequent formal application (LINZ file ref.: GES-N15-09/131/01), the Board gazetted in November 2009 the names Krone Creek, Seeliger Creek, and Venus Valley (in line with the Board's policy of not using the possessive case).

⁹ Institut für Angewandte Photophysik, Dresden, Krone Archive KAD_T034_04M2 and KAD_T034_M1.

¹⁰ A detailed account of the Enderby Settlement has been given in *Enderby Settlement Diaries. Records of a British Colony at the Auckland Islands 1849-1852*, diarists W.A. Mackworth & W.J. Munce. Edited by P.R. Dingwall, C. Fraser, J.G. Gregory, & C.J.R. Robertson. Wellington: Wordsell Press/Wild Press.

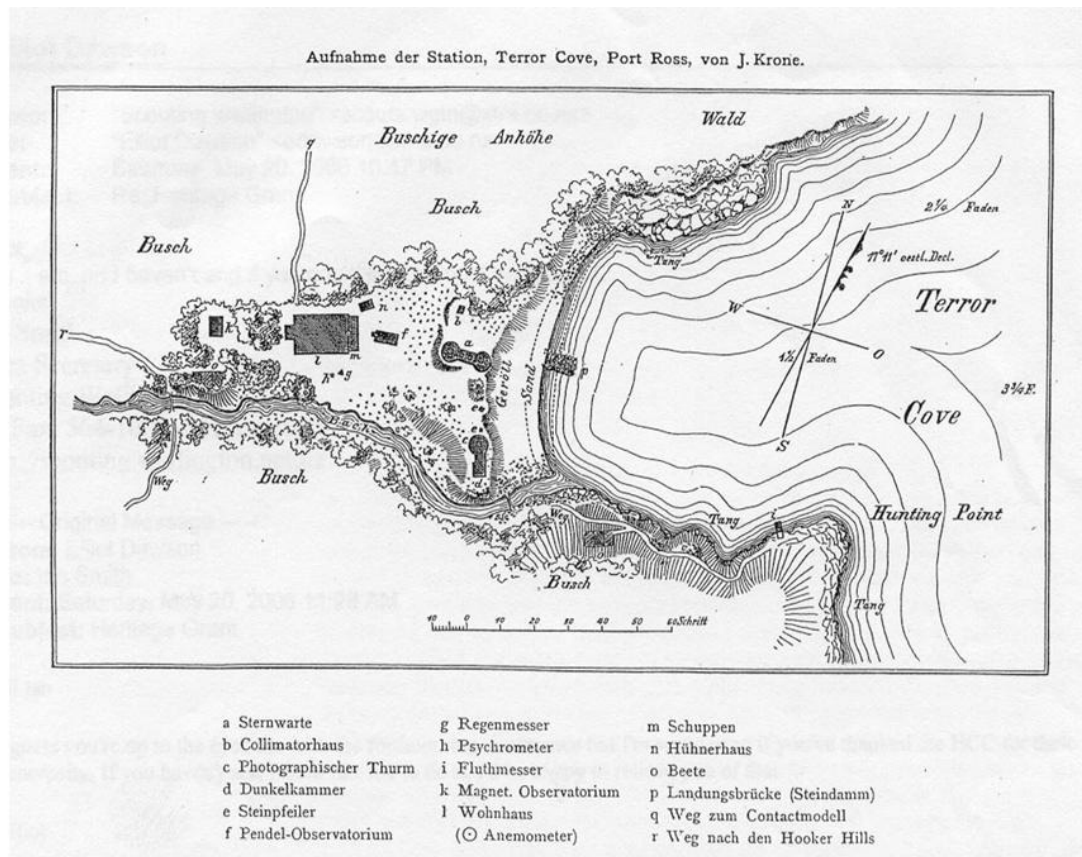


Fig. 2: Johannes Krone's plan showing the location of expedition buildings, instruments and other facilities in Terror Cove.¹¹

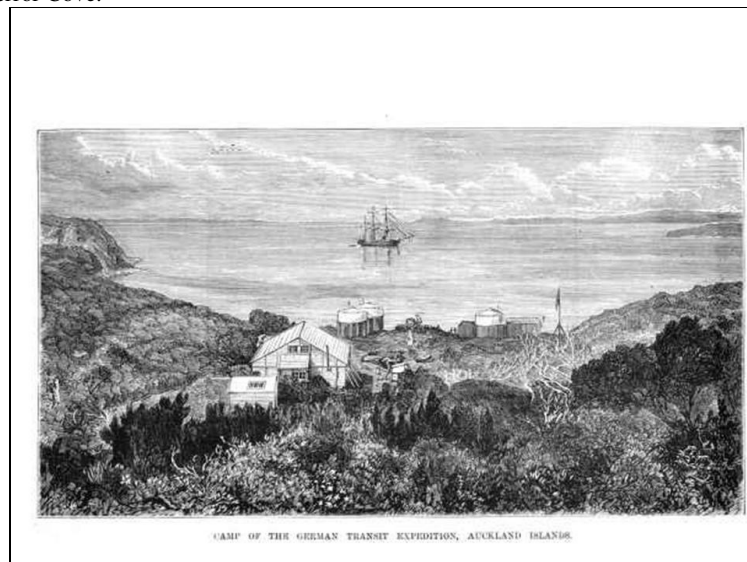


Fig. 3: The campsite as portrayed in a Melbourne newspaper about 3 weeks after the expedition's return to Melbourne [Dawson & Duerbeck 2008: 30].

¹¹ Features on this plan are referred to herein as 'items.'

THE APPEARANCE OF THE SITE AND RELICS IN 2007

The most obvious relics observed during the visit were two red brickwork columns built at the top of the raised rocky beach in Terror Cove, about 20-25 metres from the southern end of the foreshore. One of these (the 'seaside column') is built near the top of the foreshore. It is less than 0.5 metre high (it was probably higher when built – it appears to be broken at the top) and is triangular in cross-section. The other, about 2.5 metres inland from the seaside column, is about 1 metre high and is square in cross-section (the 'inland column'). Both structures appear to have formed the base of the 'Sternwarte' (item *a*) in Figure 2. Fragments of one or more broken brown glass bottles sit on the top of the inland column (and have presumably been placed there by earlier visitors). A square concrete plaque set at ground level bearing the inscription "German Expedition 1874" is 30-50 cm on the sea side of the inland column, *i.e.* it is located between the two brickwork columns. The plaque also shows an X near the centre, possibly a geographic trigonometrical point. It is puzzling that the inscription is written in English and not in the German language. Perhaps the writing is unfinished because the area of the plaque is easily large enough for an inscription in German to have been made. About two metres to the north of the 'Sternwarte', and possibly forming part of it, is a small concrete base into which a short steel pipe has been embedded vertically. The mostly level site occupied by the largest building, 'Wohnhaus' (item *l*) and 'Schuppen' (item *m*), and also by 'Pendel Observatorium' (item *f*) is clearly evident about 20 to 25 metres inland of the raised rocky beach but there are no relics on the ground. It is wet spongy land and now supports scattered fern-shrub-sedge-moss ground vegetation. Raised earth forming the edges of parts of former pathways, or tracks, are visible, the most obvious and extending for more than 15 metres is on slightly sloping land just to the west of the site of the 'Magnet. Observatorium' (item *k*). It is possibly part of an old track described as 'Weg nach den Hooker Hills' (item *r*). I could find no other evidence of the former expedition base during this short visit – it seems that all traces on the land surface have disappeared. No attempt was made to dig into the soil to look for relics. Decay of wood occurs slowly in the low ambient temperature of the Auckland Islands, despite the wet conditions. One large rata stump at the top of a bank immediately to the south of the point where the stream flows into the sea shows sharp edges that might have been made when large branches were cut using a saw or axe during forest clearance; it seems that this stump has survived since being cut many years ago. Some smaller stumps at the top of the bank south of the stream have also survived the passage of time and show axe cut or sawn surfaces.

PHOTOGRAPHS

The following photographs taken on 22 January 2007 illustrate the present day appearance of the expedition site and relics. Comparisons are made with two 1874 Krone photographs.



Fig. 4: Plaque inscribed by Johannes Krone, bearing the inscription “German Expedition 1874” [IA: IMGP1014].



Fig. 5: Looking from Terror Cove towards Shoe Island in Port Ross from the position of the ‘seaside column’ and the German Expedition 1874’ plaque. Hunting Point is on the right (partly obscured by trees) [IA: IMGP1037].



Fig. 6: Terror Cove in 2007 from Hunting Point, looking towards the rocky foreshore and rata forest from a similar position used by Hermann Krone in 1874 [IA: IMGP1020]. There is no evidence of the tide gauge building ('Fluthmesser', item i) shown in the Krone photograph below.



Fig. 7: Krone's 1874 view [Krone Archive FH_4127, 'Zwei Männer an einem Fluß'].



Fig. 8: The Terror Cove foreshore showing the stream (now named Seeliger Creek) flowing into the cove [IA: IMGP1028+1029]. The triangular brick column can be seen in the grassy area to the left of a grass covered knoll below the trees, near the top left of the photo – compare Fig. 9.



Fig. 9: A comparable Krone photograph of the foreshore of Terror Cove [Krone Archive FH_4125, 'Baracken der Forschungsexpedition']. Dense rata forest now growing on the slope above the stream prevents photography from the exact position used by Krone.



Fig. 10: The 'inland column' and the top edge of the 'German Expedition' plaque [IA: IMGP1015].



Fig. 11: The 'seaside column' located at the top of the rocky beach [IA: IMGP1016].



Fig. 12: The two brickwork columns shown together [IA: IMGP1017]. The ‘German Expedition 1874’ plaque is at ground level in front of the fern growing beside the ‘inland column’ – see Fig. 10.



Fig. 13: A small concrete base into which a short steel pipe is embedded, about two metres north of the two brickwork columns [IA: IMGP1034].



Fig. 14: The ‘German Expedition 1874’ plaque and a concrete base into which a steel pipe is embedded (partly obscured by with vegetation) [IA: IMGP1035].



Figs 15 & 16: Two views in 2007 of the site of the 'Wohnhaus' and nearby buildings, now covered with forest
[IA: IMGPI008 above; IMGPI022 below].





Figs 17 & 18: Looking at the ground of the site of the 'Photographischer Thurm' (item *c*) and 'Dunkelkammer' (item *d*) [IA: IMGP1039, above; IMGP 1039, below]. The discoloration at the top of the upper photograph is caused by rainwater droplets on the camera lens! Both views required flash.





Figs 19, 20 & 21: Three views of a footpath, or track, a little to the west of the site of the 'Magnet. Observatory' (item *k*), that appears to be part of a track described as 'Weg nach den Hooker Hills' (item *r*) [IA: IMGP:1004, left; IA: IMGP1010, right; IMGP1009, below].





Figs 22, 23 & 24: Views of three stumps at the top of the bank immediately south of the stream that appear to have survived the passage of time and show axe cut or sawn surfaces. (AI: IMGP1047, top left; IMGP1041, top right; IMGP1044, below. (All views required flash).





Fig. 25: The stream (now named Seeliger Creek) from the top of the bank photographed from just above the point where the stream flows across the beach [IA: IMGP1045]. The approximate site of the ‘Dunkelkammer’ and ‘Photographischer Thurm’ is the lighter coloured area near the top right of the photograph. A small piece of the foreshore shows through the rata trees near the lower right.



Fig. 26: This view looks about three metres to the right of photograph above (Fig. 25) and shows Seeliger Creek flowing across the beach [IA: IMGP1046]. It is taken from approximately the same position used by Krone in Fig. 9.



Fig. 27: The Terror Cove foreshore viewed from the shoreline on the north side of the cove looking towards the grassy and scrubby land on the valley floor and the rata forest on the slopes [IA: IMGP1031]. The red brickwork 'seaside column' located at the top of the grassy land above the stony shore can be seen in the centre of the photograph – see also views in Figs 5 & 6.



Fig. 28: The southern edge of Terror Cove looking a little to the left of the view shown in Fig. 27. The rounded crowns of several colourful rata trees in the centre of the photograph grow on the bank immediately to the south of the point where the stream flows across the beach [IA:IMGP1033]. Krone's photograph (Fig. 8) shows a large stump of a rata in the approximate position of the uppermost of these trees.



Fig. 29: Looking towards the site formerly occupied by the 'Wohnhaus' (item *l*) and nearby buildings, now covered with dense rata dominant forest [IA: IMGP1011]. This view looks east from a slight rise in the land a little to the west of the site of the 'Magnet. Observatorium' (item *k*) and from a position beside a part of the track described as 'Weg nach den Hooker Hills' (item *r*).



Fig. 30 (left): Looking towards Shoe Island in Port Ross from the Terror Cove foreshore. Hunting Point is on the right [IA: IMGP1036] - see also view in Fig. 5.

Fig. 31 (right): The author standing beside the two brickwork columns [IA: IMGP1018] - see also view in Fig. 12.

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